Pteranodontidae

The **Pteranodontidae** are a family of large pterosaurs of the Cretaceous Period of North America and Africa. The family was named in 1876 by Othniel Charles Marsh. Pteranodontids had a distinctive, elongated crest jutting from the rear of the head (most famously seen in Pteranodon itself). The spectacularly-crested Nyctosaurus is sometimes included in this family, though usually placed in its own family, the Nyctosauridae (Nicholson & Lydekker, 1889).

Modern researchers differ in their use of the concept. S. Christopher Bennett and Alexander Kellner have concluded that Nyctosaurus was not a pteranodontid. In 1994 Bennett defined a clade Pteranodontidae, also including species of the Anhangueridae. [1] However, this definition has not been accepted by other workers. Alexander Kellner, for example, named several additional species for specimens previously classified as Pteranodon, and placed P. sternbergi in a distinct genus, Geosternbergia. Kellner re-defined Pteranodontidae as the most recent common ancestor of *Pteranodon* longiceps, Geosternbergia sternbergi and Dawndraco kanzai, and all of its descendants. This definition is now contentious, however, as the validity of Dawndraco has been disputed and the utility of separating *Geosternbergia* from *Pteranodon* questioned.^[2] This clade possibly includes the nyctosaurids. Analyses by David Unwin did indicate a close relationship between Pteranodon and Nyctosaurus, and he used the name Pteranodontia for the clade containing both.

Pteranodontids are primarily known from the Coniacian to Campanian stages of the Cretaceous in North America and Japan. [3] However, potential Maastrichtian remains have been identified from several other locations, [4][5] being actually rather common in the Maastrichtian of the Tethys Sea. Beginning in 2016, Nicholas Longrich, David Martill, and Brian Andres presented evidence of several nyctosaurid and pteranodontid species from the latest Maastrichtian age of north Africa, suggesting that both lineages went through an evolutionary radiation in the Tethys region shortly before the K–Pg extinction event. [6][7][8] Additionally, later phylogenetic studies imply that they represent a ghost lineage dating much earlier in the Cretaceous.^[9]

References

1. Bennett, S. C. (1994). "Taxonomy and systematics of the Late Cretaceous pterosaur Pteranodon (Pterosauria,

Pterodactyloidea)", Occasional Papers of the Museum of Natural History, University of Kansas, Lawrence, 169: 1-70

Pteranodontids Temporal range: Late Cretaceous, 88-66 Ma

Pre€ € OS D C P T J K PgN



Mounted replicas of female and male Geosternbergia sternbergi skeletons (Royal Ontario Museum).

Scientific classification /



Kingdom: Animalia Phylum: Chordata Order: †Pterosauria Suborder: †Pterodactyloidea Clade: †Pteranodontoidea Clade: †Pteranodontia Family: †Pteranodontidae Marsh, 1876		
Order: †Pterosauria Suborder: †Pterodactyloidea Clade: †Pteranodontoidea Clade: †Pteranodontia Family: †Pteranodontidae	Kingdom:	Animalia
Suborder: †Pterodactyloidea Clade: †Pteranodontoidea Clade: †Pteranodontia Family: †Pteranodontidae	Phylum:	Chordata
Clade: †Pteranodontoidea Clade: †Pteranodontia Family: †Pteranodontidae	Order:	†Pterosauria
Clade: †Pteranodontia Family: †Pteranodontidae	Suborder:	†Pterodactyloidea
Family: †Pteranodontidae	Clade:	†Pteranodontoidea
,	Clade:	†Pteranodontia
Marsh, 1876	Family:	†Pteranodontidae
		Marsh, 1876

Type species

†Pteranodon longiceps Marsh, 1876

Genera

- †Dawndraco
- †Geosternbergia
- †Pteranodon
- †Tethydraco

- Elizabeth Martin-Silverstone; James R.N. Glasier; John H. Acorn; Sydney Mohr; Philip J. Currie (2017). "Redescription of *Dawndraco kanzai* Kellner, 2010 and reassignment of the type specimen to Pteranodon sternbergi Harksen, 1966" (https://ejournals.library.ualberta.ca/index.php/VAMP/article/view/28721). *Vertebrate Anatomy Morphology Palaeontology*. 3: 47–59. doi:10.18435/B5059J (https://doi.org/10.18435%2FB5059J). ISSN 2292-1389 (https://www.worldcat.org/issn/2292-1389).
- Alexander W.A. Kellner, Fabiana R. Costab, Xiaolin Wang & Xin Cheng, Redescription of the first pterosaur remains from Japan: the largest flying reptile from Asia, Volume 28, Issue 1-2, 2016 Special Issue: Contributions to vertebrate palaeontology in honour of Yukimitsu Tomida, DOI:10.1080/08912963.2015.1028929
- 4. Barrett, P. M., Butler, R. J., Edwards, N. P., & Milner, A. R. (2008). Pterosaur distribution in time and space: an atlas. *Zitteliana*: 61-107.[1] (http://epub.ub.uni-muenchen.de/12007/1/zitteliana_2008_b28_05.pdf)
- 5. Federico L. Agnolin and David Varricchio (2012). "Systematic reinterpretation of *Piksi barbarulna* Varricchio, 2002 from the Two Medicine Formation (Upper Cretaceous) of Western USA (Montana) as a pterosaur rather than a bird". *Geodiversitas*. **34** (4): 883–894. doi:10.5252/g2012n4a10 (https://doi.org/10.5252%2Fg2012n4a10).
- 6. Longrich, Nicholas, et al. 2016. LATE MAASTRICHTIAN PTEROSAURS FROM THE TETHYS SEAWAY PROVIDE EVIDENCE FOR MASS EXTINCTION OF PTEROSAURS AT THE CRETACEOUS-PALEOGENE BOUNDARY. SVPCA 2016 Liverpool Abstract Book 3, 22.
- 7. Witton, Mark. "New paper: when the short-necked, giant azhdarchid pterosaur Hatzegopteryx ruled Late Cretaceous Romania" Mark Witton.com Blog. Mark Witton.com Blog. Patreon Supporters, 18 Jan. 2017. Web.
- 8. Longrich, N.R., Martill, D.M., and Andres, B. (2018). <u>Late Maastrichtian pterosaurs from North Africa and mass extinction of Pterosauria at the Cretaceous-Paleogene boundary.</u> (http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2001663) *PLoS Biology*, **16**(3): e2001663. <u>doi:10.1371/journal.pbio.2001663</u> (https://doi.org/10.1371%2Fjournal.pbio.2001663)
- 9. Andres, B.; Myers, T. S. (2013). "Lone Star Pterosaurs". *Earth and Environmental Science Transactions of the Royal Society of Edinburgh*: 1. doi:10.1017/S1755691013000303 (https://doi.org/10.1017%2FS1755691013000303).

Retrieved from "https://en.wikipedia.org/w/index.php?title=Pteranodontidae&oldid=953653150"

This page was last edited on 28 April 2020, at 10:28 (UTC).

Text is available under the <u>Creative Commons Attribution-ShareAlike License</u>; additional terms may apply. By using this site, you agree to the <u>Terms of Use and Privacy Policy</u>. Wikipedia® is a registered trademark of the <u>Wikimedia</u> Foundation, Inc., a non-profit organization.